



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

Contact: Eugene F. Gorzelnik
efg@nerc.com

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Electric Systems Exercise Y2k Telecommunications Capabilities

Today the electric power industry of North America conducted a Year 2000 drill simulating the partial loss of voice and data communications needed to operate the electric power grids of the United States and Canada. This drill was facilitated by the North American Electric Reliability Council (NERC), who is coordinating Y2k preparations of the electric power industry and monitored by the U. S. Department of Energy. At no time during the drill, were electric customers affected by the exercise.

Overall, we can report that the drill was a successful exercise of back up voice systems and manual procedures needed to operate in the unlikely event of a loss of communications due to Y2k. Twenty-two regional security coordinators participated in the drill, in addition to about 200 electric utilities across North America. Initial reports indicate more than 2,000 electric utility personnel participated in the drill.

Typical drill scenarios included loss of external voice systems and real-time data systems used to monitor and control electric power systems. Additional aspects of the drill included partial loss of data acquisition and control computers in the energy control centers. Several hundred generating units participated in the drill, including coal, gas, oil, coal, hydro, and nuclear facilities. Over 500 critical electric facilities around the continent were staffed with field personnel using backup radio, privately owned telephone switches, microwave, and satellite voice systems. These personnel relayed critical information, such as power flows, voltage and frequency, back control centers to allow critical system operating tasks, including generation dispatch and energy interchange. Some of this information from substations and power plants was updated every 15 minutes to allow the simulation of continuous monitoring and control. Additionally, the drill included interarea coordination across regional boundaries with NERC and DOE personnel in the DOE Headquarters Emergency Operations Center in Washington, DC.

This drill was extremely valuable for the training of personnel and practicing backup communications procedures. Many lessons learned have been identified in the initial assessment conducted late this afternoon.

- There were some incorrect phone numbers identified.
- Geographic coverage of low and high frequency radios will require relocation of some antennas.

- Personnel require additional training on the use of satellite voice systems; however, some of these systems have been only recently installed, leaving little time for training prior to the drill.
- Some congestion of voice traffic on some of the backup systems indicates a need to establish and practice voice traffic priorities.
- Some of the backup voice transmissions were noisy.
- A small number of the backup systems did not work as planned and will require further checkout prior to the next drill.
- There were severe lightning storms in the Midwest today associated with a storm front; this weather did temporarily interfere with some of the radio systems.

The electric industry backup communications drill was successful in that it provided an opportunity to exercise backup communications systems and procedures. As the industry prepares for a second major Y2k drill on September 8-9, they will implement these lessons learned.

NERC is a not-for-profit industry group that works with all segments of the electric industry as well as customers “to keep the lights on” throughout North America. It does this by setting reliability standards for interconnected electric transmission system operations.